

Claims

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- 10 1. A device for transporting liquids along predetermined guideways, which are provided in a body (2), whereby the structures forming the guideways are adapted to be attached to a corresponding complementarily shaped opposite body (1), characterized in that the body (2) is provided with recesses (21) and capillary gap forming elevations (22), and in that means (5) for spacing apart are provided, whereby between each adjacent elevations (22) there remains such a large recess (21) that the latter is capillarily inactive.
- 15 2. A device as claimed in claim 1, characterized in that at least one liquid supply means (3) adapted to be dosed is associated to the elevations (22).
- 20 3. A device as claimed in claim 1, characterized in that each capillary gap (4) is provided with a discrete liquid supply means (3).
- 25 4. A device as claimed in claim 1, characterized in that the body (2) supporting the elevations (22) and the recesses (21) is formed by a plane cover plate (23).
- 30 5. A device as claimed in claims 1 and 4, characterized in that the opposite body (1) is formed by a plane support plate (11).
6. A device as claimed in claims 1 and 5, characterized in that the spacing means (5) are components of the support plate (11).
7. A device as claimed in claim 1 and 4, characterized in that the spacing means (5) are components of the cover plate (23).

8. A device as claimed in claim 1, characterized in that the spacing means (5) are arranged in the form of regularly distributed bars.

5 9. A device as claimed in claim 1, characterized in that the means (5) for spacing apart the body (2) and the opposite body (1) are designed as discrete spacer elements (51) sealingly insertable between the body (2) and the opposite body (1), said spacer elements (51) being given a preselectably defined height (x) in dependence on the fluid to be directed along the capillary gap (4).

10. A device as claimed in claim 1, characterized in that the capillary gap forming elevations (22) are designed as continuous bars.

15 11. A device as claimed in claim 1, 4 and 5, characterized in that the cover plate (23) is adapted to be attached to the support plate (11) detachably and free of tensions in different directions.

20 12. A device as claimed in claim 1, characterized in that, on the body (2), a plurality of capillary gaps (4) is provided independently from each other and with an inlet and outlet each (41; 42).

25 13. A device as claimed in claim 1, characterized in that, on the body (2), a plurality of capillary gaps (4) is provided, which are partially or entirely connected to each other, and the respective connected capillary gaps (4) are provided with an inlet and outlet (41; 42).

30 14. A device as claimed in claim 1, 4 and 5, characterized in that the arrangement and the route of the elevations (22) are determined by the liquid guideways (43) predetermined on the support plate (11).

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15. Application of a device for transporting liquids along predetermined guideways as claimed in at least one of the preceding claims, characterized in that plane, planar or substrate plates provided with recesses are used as support plates (11).

16. Application of a device for transporting liquids along predetermined guideways as claimed in at least one of the preceding claims, characterized in that bio-chips are used as support plates (11).

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17. Application of a device for transporting liquids along predetermined guideways as claimed in at least one of the preceding claims, characterized in that micro-titer plates or nano-titer plates are used as support plates (11).

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